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NEWS FOR THE UCSF CAMPUS COMMUNITY VOL. 14, NO. 3 FEBRUARY 5, 1999

Study finds direct role of antibodies in development of multiple sclerosis

BY JENNIFER O'BRIEN

Researchers have discovered that the body's own antibodies — considered minor, perhaps inconsequential, culprits in the development of multiple sclerosis — actually play a direct role in the development of the disease.

The study, published in the February issue of Nature Medicine, was conducted by scientists at UCSF and the Albert Einstein College of Medicine in New York City.

The finding suggests that the suspicion of blame, currently resting on the immune system's T cells, which produce such chemical weapons as cytokines, should extend to B cells, which produce antibodies. It also suggests a possible new target for drug therapy for the intermittent, generally progressive neurologic disorder that remains elusive to wholly successful treatment.

The researchers conducted their study on brain tissue taken from patients with multiple sclerosis (MS), as well as animals with a disease model resembling MS, called experimental allergic encephalomyelitis (EAE).

Researchers determined that in active lesions an antibody directly contributes to the destruction of myelin, a membranous sheath with highly organized structure that surrounds the communication wires, or axons, between nerve cells in the brain and whose destruction is characteristic of MS.

"We determined that these antibodies were bound to their target in myelin as the membrane was in the process of being disintegrated," says Claude Genain, an assistant professor of neurology at UCSF. "This is direct evidence that the antibody plays an integral role in the formation of the ruptured myelin sheath."

Researchers have long suspected that MS is an "auto," or "self," immune disease, in which the body's own immune system turns against specific targets, or antigens, in tissues of the body. But teasing out the role and relative contributions of the various, and often intertwined components of the immune system — T cells, B cells and macrophages being the key players — has been daunting.

In recent work, the UCSF/Einstein team has studied an EAE model in which the way myelin is destroyed is identical to the process that occurs in expanding lesions of MS. In this work, they determined that myelin destruction occurred only in the presence of both auto-reactive T cells and auto-reactive B cell antibodies directed against a minor protein of myelin called myelin oligodendrocyte glycoprotein (MOG).

Thus, the team was prompted to reconsider the role of B cells and the antibodies they produce, which were generally discounted years ago. A senior author of the study, Cedric Raine, professor of neurology, neuroscience and pathology at the Albert Einstein College of Medicine, was a pioneer in investigating the antibody theory. "Thirty years ago, we suspected antibodies played a role, but we lacked the technology to show it," says Raine. "The significance here is that for the first time we've been able to localize antibodies to the myelin sheath and to demonstrate their involvement in myelin breakdown."

The study suggests that T cells and B cells may play an integrated role in the destruction of the sheath. "Clearly," Genain says, "the immune system of humans is much more complex than we had been led to believe on the basis of previous work, and much more difficult to manipulate than in rodents. There are many clinical and pathological presentations of multiple sclerosis."

LISA CISNEROS

Medical student Milana Boukhman, right, talks with Nancy Harvey, human resources manager of Covance, at last Friday's career fair.

Biotech day provides key contacts

BY LISA CISNEROS

Representatives from biotech and pharmaceutical companies who participated in a career fair at UCSF say business is robust and they are looking to hire world-class scientists and researchers of all kinds.

"We posted 15 job openings in January and we'll have five or ten a month after that," said Laura Hernandez of Molecular Dynamics Inc. (www.mdyn.com), a leading supplier of systems that accelerate genetic discovery and analysis. "We are very busy preparing for two new products."

Nancy Harvey, human resources manager for Covance, a contract clinical research firm, said the company has openings due to an increase in outsourcing for clinical trials. "It's a good time for people who have experience conducting clinical studies. We need project mangers, clinical research associates and data coordinators."

Sponsored by the UCSF Career Center, Biotech Industry Day drew hundreds of students, postdocs and others seeking to learn about opportunities at 22 major firms, including industry giants Genentech Inc. and Pfizer Inc. Another career fair featuring health care organizations will be held at UCSF on Friday, May 14.

"Today's event serves as an excellent opportunity for members of the UCSF community and representatives from industry to connect with each other, and to learn firsthand about the science taking place within both settings," said Michael Alvarez, director of the Career Center.

Based in Sunnyvale, Molecular Dynamics produces technological tools to aid biological research procedures, such as the MegaBACETM 1000 DNA Sequencing System. Developing technologies for applications in the emerging genomics industry, including gene discovery, gene expression and drug development, the company is seeking to fill positions for scientists, postdoctoral fellows, research associates and software application specialists. Successful candidates will bring with them knowledge about gene expression analysis and hybridization and genotyping, among other things.

"I find it helpful to understand what these companies are looking for," said Karl Schweighover, a postdoc in the pharmaceutical chemistry department.

Schweighover said he's optimistic about the future of the biotech industry, specifically the field of bioinformatics. He said, though, he's uncertain of where he will fit in.

Second-year medical student Milana Boukhman wasn't looking to fit into a career just yet, but she went to the fair to get a feel for what's available.

(SEE BIOTECH ON PAGE 3)

DAVID POWERS

Jay A. Levy

Levy updates pathogenesis of AIDS

BY LISA CISNEROS

AIDS research pioneer Jay A. Levy puts the latest advancements made in understanding HIV and the pathogenesis of AIDS into perspective in a second edition to his earlier work on the subject.

Levy updated and rewrote the reference book in light of the significant revelations in HIV research in both basic and clinical science in recent years.

Published by the American Society for Microbiology, "HIV and the Pathogenesis of AIDS" offers an overview of the most current knowledge on many aspects of HIV infection and control, such as features of transmission, cell-mediated responses to HIV and the prognosis for long-term survival.

The book is widely touted as the "bible" of HIV research.

"I hope the revised text will continue to be of help to investigators, health care providers, and students who are joining in the efforts to find a solution to this devastating disease," says Levy, professor of medicine and research associate at the Cancer Research Institute at UCSF.

Levy acknowledges many advances made in the pursuit of understanding HIV pathogenesis since his first book was published in 1994. Among them:

- Many more HIV-1 clades or viral genotypes have been recognized, indicating the rapid spread and diversity of the AIDS virus worldwide.

(SEE LEVY ON PAGE 7)

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Dana Deardorff, graduate student researcher, bioengineering: Received the National Alliance for Excellence Inc. Award in Technological Innovation by the National Alliance for Excellence (NAE). A candidate in a joint doctoral program with both UCSF and UC Berkeley, Deardorff has conducted groundbreaking studies exploring the clinical use of sophisticated ultrasound technologies in thermal treatment of localized tumors. Says NAE president Linda Paras, "Dana Deardorff's work epitomizes excellence in both the biosciences and biomedical engineering."

William C. Dewey, professor and director of the UCSF Radiation Oncology Research Laboratories: Received the American Society for Therapeutic Radiology & Oncology "Gold Medal" presented to him at a ceremony during the 40th annual ASTRO meeting in Phoenix. Dewey was recognized for his "distinguished service and contribution to medicine and to the society."

Andrew Dillin, PhD: Received the Damon Runyon-Winchell Fellowship Award funded by the Cancer Research Fund. Selected at the November scientific advisory committee review, the recipients of this prestigious award are outstanding young scientists conducting theoretical and experimental research that is relevant to the study of cancer and the search for cancer causes, mechanisms, therapies and prevention. Dillin's three-year fellowship is carried out in the laboratories of Cynthia Kenyon, professor of biochemistry and biophysics. His research is titled, "Determinants of longevity in the nematode *C. elegans.*"

Richard H. Kallet, education coordinator for Respiratory Care Services at San Francisco General Hospital Medical Center and clinical research coordinator for the UCSF Cardiovascular Research Institute: Received the 1998 "Respiratory Care Literary Award for Best Original Paper" from the American Respiratory Care Foundation. He received the honor, which includes $1,000 in cash, at the recent annual meeting of the International Respiratory Congress in Atlanta. Kallet is first author of the winning paper, "Acute Pulmonary Edema Following Upper Airway Obstruction: Case Reports and Brief Review," which was published in the June 1998 issue of Respiratory Care. The paper presents well-documented rare cases of pulmonary edema (lung swelling) resulting from asphyxiation. For more than 20 years, there has been speculation in the medical literature about the exact mechanism that causes this unusual type of edema. The paper presents evidence that the disorder results from high pressure gradients across the lung tissue rather than direct injury to the lung itself.

Michael W. Rabow, assistant clinical professor of medicine: Awarded a $450,000 grant from the Robert Wood Johnson Foundation for a three-year research project, titled "The Comprehensive Care Team: A Controlled Trial of Care at the Beginning of the End of Life."

Rabow along with a team of multidisciplinary professionals in UCSF's division of general internal medicine and the Center for Collaborative Innovation in Primary Care are working with the Hospice by the Bay to provide seriously ill patients with state-of-the-art curative care while also providing palliative care.

Under the direction of Rabow, researchers will conduct a controlled trial to evaluate a program that will allow outpatients who may be nearing death to pursue simultaneously two forms of care. Patients will be offered symptom control and social support to improve their quality of life. At the same time, they will undergo intensive life-prolonging therapy. An interdisciplinary team of more than a dozen professionals will provide comprehensive care and family caregiver support.

Using a case management model, the program will assess the feasibility, impact, and cost-effectiveness of eliminating the split between life-prolonging care and palliative services.

Corrections

The Jan. 22 issue of Newsbreak listed the wrong date for the Black & White Gala, hosted by Empact! Presents. The correct date of the event is Saturday, May 1.

The Dec. 11 issue of Newsbreak credited the wrong group for efforts to refurbish the Founders Clock, which stands as a landmark on the Parnassus campus. The clock was completely rebuilt thanks to efforts by the Faculty Wives & Associates.

Blackburn wins two major awards

Blackburn

Elizabeth Blackburn, chair of the UCSF department of microbiology and immunology, has received two major awards for her outstanding achievements in science.

She was awarded the 1998 Passano Award and was named the 1999 California Scientist of the Year for her pioneering studies that have revealed the critical role of telomeres, segments of DNA that bind both ends of chromosomes.

Beginning in 1945, the Passano Foundation, which serves to encourage medical science and research, has presented an award each year for major advancements in science. To date, 20 Passano award winners have subsequently received the Nobel Prize, including UCSF Chancellor Mike Bishop.

First awarded in 1958, the California Scientist of the Year award recognizes contributions to science which are "easily recognizable as a definite advance of knowledge." The award is given by the California Science Center, a department of the state of California, and its nonprofit affiliate, the California Science Center Foundation. Eleven California Scientists of the Year are Nobel laureates, Bishop included.

Recognized as one of the top scientists in the world, Blackburn and her then PhD graduate student at UC Berkeley, Carol Greider, discovered a novel enzyme that creates telomeres. Telomeres play a key role in determining the number of times a cell divides – an event that affects the life span and health of cells and the development of some cancers. Blackburn's discovery has spawned a whole field of inquiry into the possibility that the enzyme, telomerase, could be manipulated to prolong cell life and combat cancer.

Blackburn joined UCSF as a professor in 1990 and was the first woman named to head the School of Medicine department of microbiology and immunology three years later.

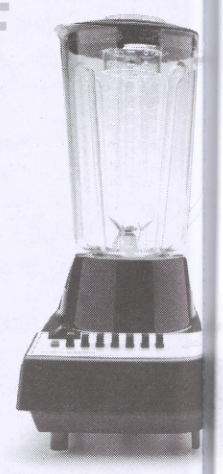
A native of Australia, she has received numerous honors and awards, including being elected as a foreign associate to the National Academy of Sciences, one of the highest honors that can be awarded to a scientist in the US, in 1993. She is also a fellow of the Royal Society of London.

Blackburn is president of the American Society for Cell Biology, an organization of nearly 9,000 members that provides for the exchange of scientific knowledge in the area of cell biology and strives to ensure the future of basic scientific research through training and development opportunities for students and young investigators.

In keeping with the California Science Center's mission to increase public awareness of science, Blackburn's accomplishments will be recognized at the annual black tie gala on Saturday, Feb. 6.

UCSF'S ELECTRONIC DAILY

UCSF daybreak



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Colleagues salute Carroll Estes

In a tribute to an international leader in aging, about 100 friends and colleagues gathered at the Faculty/Alumni House recently to honor Carroll Estes, UCSF professor of sociology in the School of Nursing's department of social and behavioral sciences.

The occasion marked the conclusion of Estes' directorship of the Institute of Health & Aging (IHA), an organization she founded in 1979 as the Aging Health Policy Center.

The IHA fosters multidisciplinary collaborative research, education, and public service in the fields of aging and health. Its faculty represent varied disciplines and health professions, including sociology, anthropology, political science, economics, public administration, public health, social work, nursing, medicine, pharmacy, dentistry and law.

Although relinquishing her administrative role, Estes will continue to teach and conduct research in public policy and aging. That plan excites many of her colleagues, who praised her contributions as both a superior scholar and social activist.

Several colleagues said they were motivated to come to UCSF in part to work with Estes, who investigates the impact of fiscal austerity and social policy on the elderly and the agencies and institutions that serve this population.

With an endless track record of accomplishments, awards and significant research endeavors, Estes was clearly moved by her tribute, which included the reading of a poem written about her, a humorous slide show and heartfelt anecdotes.

"Carroll has been tremendously supportive of our faculty," says Wendy Max, UCSF associate professor of medical economics. "It is hard to imagine the Institute without her."

Max and Patrick Fox, associate professor of sociology in residence, are serving as interim co-directors of the IHA.

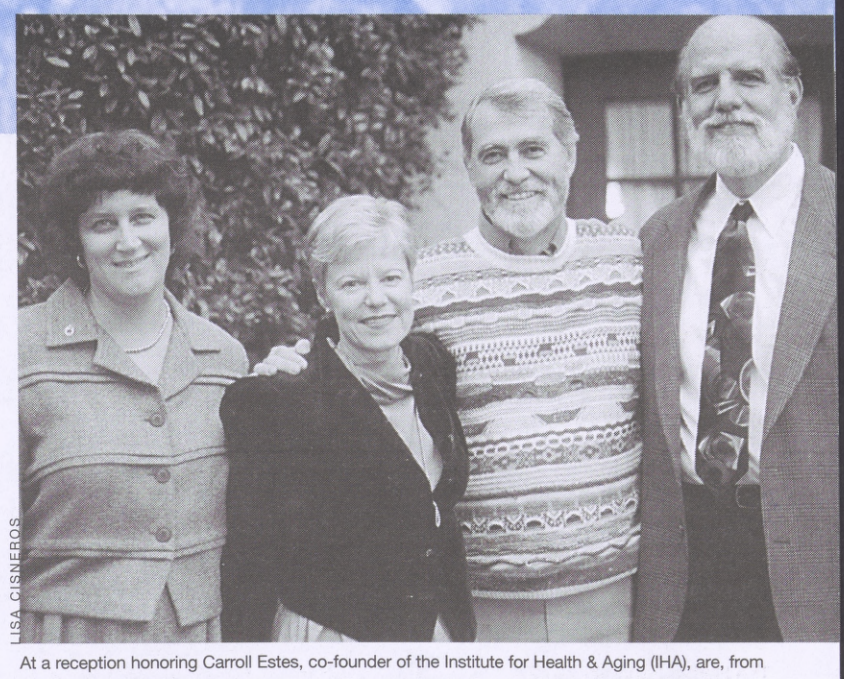
"As founding director of the IHA, Carroll's biggest contribution has been her remarkable vision of the Institute and what it could become," Fox says. "She always saw the IHA as a public service and research institute and kept it on a steady course."

Voted last year as a "Woman Who Could Be President" by the League of Women Voters, Estes is often called upon to speak as a national authority on aging. After her reception, she caught the red-eye flight to Washington DC, where she met with President Clinton about Medicare and Social Security at the White House the following day.

Estes also has been a consultant to the US Senate and House of Representatives committees on aging for more than a decade, and a member of the Social Security "Notch" Commission and the California Commission on Aging. In addition, she was a delegate to the 1981 and 1995 White House Conferences on Aging. Estes serves as a consultant to the commissioners of Social Security and the agency's Office of Research, Evaluation and Statistics.

Estes conducts national studies on the organization, delivery and financing of health, mental health and long-term care services. She also studies the effects of policy changes on welfare state support for the elderly, community care and the role of the nonprofit sector in health and human services. She developed the field of the political economy of health and aging.

A member of the Institute of Medicine of the National Academy of Sciences, Estes is past president of the Gerontological Society of America, the American Society on Aging and the Association for Gerontology in Higher Education. She is past vice president of the Older Women's League.



LISA CISNEROS

At a reception honoring Carroll Estes, co-founder of the Institute for Health & Aging (IHA), are, from left, Wendy Max, Estes, Bob Newcomer, chair, social and behavioral sciences, and Patrick Fox. Max and Fox are interim co-directors of the IHA.

Three students become Osher scholars

Three promising students, Paul Abeyta, Jody Stonehocker and John Young, are the first three Osher scholars to receive financial support for their education.

Last spring, the Bernard Osher Foundation made a $1 million endowment to the UCSF School of Medicine to provide financial aid for medical students through the Osher Scholars Program.

Each student, who has demonstrated financial need and a commitment to community service, was selected for showing high promise for their future professional careers. Each will receive about $5,500 per year for the second, third and fourth years of medical school.

The dual purpose of the Osher Scholars Program is to assist students with costs to reduce the debt that they would otherwise accrue by graduation time, and to recognize community service.

Abeyta, a graduate of UC Berkeley who grew up in Richmond, has participated in the Bayview-Hunters Point, Mission Neighborhood, and Immigrant Pride Day health fairs. He also volunteers at the student-organized health care clinics for the homeless that are located in San Francisco's South of Market and Tenderloin districts.

At the Chicano/Latino Medical Student Association, he is involved with undergraduate outreach at UC Davis and with the UC Berkeley Biology Scholars Program.

As an outreach representatives of the School of Medicine's Admissions Committee, Abeyta works with Latino medical school applicants to ease their fears about the interviewing process and to introduce them to UCSF. He also helps organize the annual Chicanos in Health Education high school recruitment day.

"Growing up in and around an underserved community greatly influenced my decision to enter medicine, and continues to shape my choice of extracurricular activities and career goals," Abeyta said.

Stonehocker is a second-year medical student and a graduate of the University of San Francisco. She does medical missionary work in the Dominican Republic and Mexico and works with migrant farm workers and their families in Yolo County and the San Joaquin Valley.

At UCSF, she has participated as a student volunteer and preceptor coordinator at the student-run clinics for homeless individuals; participated in Mission District health fairs; and taught health-related topics to middle school students as a participant in the Science and Health Education Partnership program.

Stonehocker has been a student organizer and leader of the campus Christian fellowship. She spent two summers working with a family physician in Ceres, California whose practice consisted of very poor Medi-Cal patients and migrant farm workers.

"I am strongly considering training as a family practitioner because it would enable me to treat a wide spectrum of medical problems in areas where other doctors may not be readily available as a resource," Stonehocker says.

Young received a BA degree in social studies from Harvard, then completed a master's degree in public policy at UC Berkeley. In between college and graduate school, he worked in the office of Assemblyman Phil Isenberg as the chief staff person for Assembly Bill 99 (Proposition 99), which created the $1.5 billion "tobacco tax" appropriation. He also served as chief of staff for Assemblywoman Barbara Friedman and wrote the Breast Cancer Act of 1993.

Young's interest in public health/public policy has continued through his work as a consultant to UCSF's Center for the Health Professions and his research, and his writing of articles on health care reform, physician supply and funding for medical education.

Young organized a successful campuswide policy forum on managed care in January 1998. His other passion has been his work as a co-developer of a six-unit, $1.2 million, co-housing project in a mixed income neighborhood of Oakland where he and his wife live. He has also established a lay counseling ministry at Rockridge United Methodist Church.

"Ten years from now, I hope to combine a primary care practice in a mixed income neighborhood with an involvement in health policy and politics," Young says.

(BIOTECH FROM PAGE 1)

During the mid-day hours, job seekers had to wait in line for a one-on-one conversation with company representatives who scanned their resumes and heard about their experience and qualifications.

Many representatives said they were impressed by what they saw: "The caliber of the resumes is excellent," said Trish Magee, of Roche Palo Alto. "Unfortunately, we do not have a lot of postdoc and scientist positions open right now. But I tell people we're still collecting resumes as turnover always occurs."

"UCSF students are always highly regarded," said Ed Bocko, a consultant for Pfizer Inc. "I've seen a lot of good candidates."

Named company of the year by Forbes Magazine, Pfizer is riding a tidal wave of success since Viagra became hugely popular. Pfizer has other drugs in the pipeline and is seeking researchers at all levels with experience in disciplines such as biochemistry, cell biology, human genetics, neuroscience and pharmacology, to name a few. The company offers excellent benefits and relocation assistance to its research facility in Groton, Connecticut, said Laura Paight, an associate in employee resources.

Edward S. Kiruluta, vice president for engineering for Pangea Systems Inc., said the Bay Area is so competitive that companies will do what they can to recruit and retain the best and the brightest. Employee stock option plans are now an industry standard.

Based in Oakland, Pangea, which creates highly flexible bioinformatics software programs to aid in drug design, has about 15 job openings. While it's important to be computer proficient, Kiruluta said that the company typically hires "scientists that are really good biologists with an interest in software."

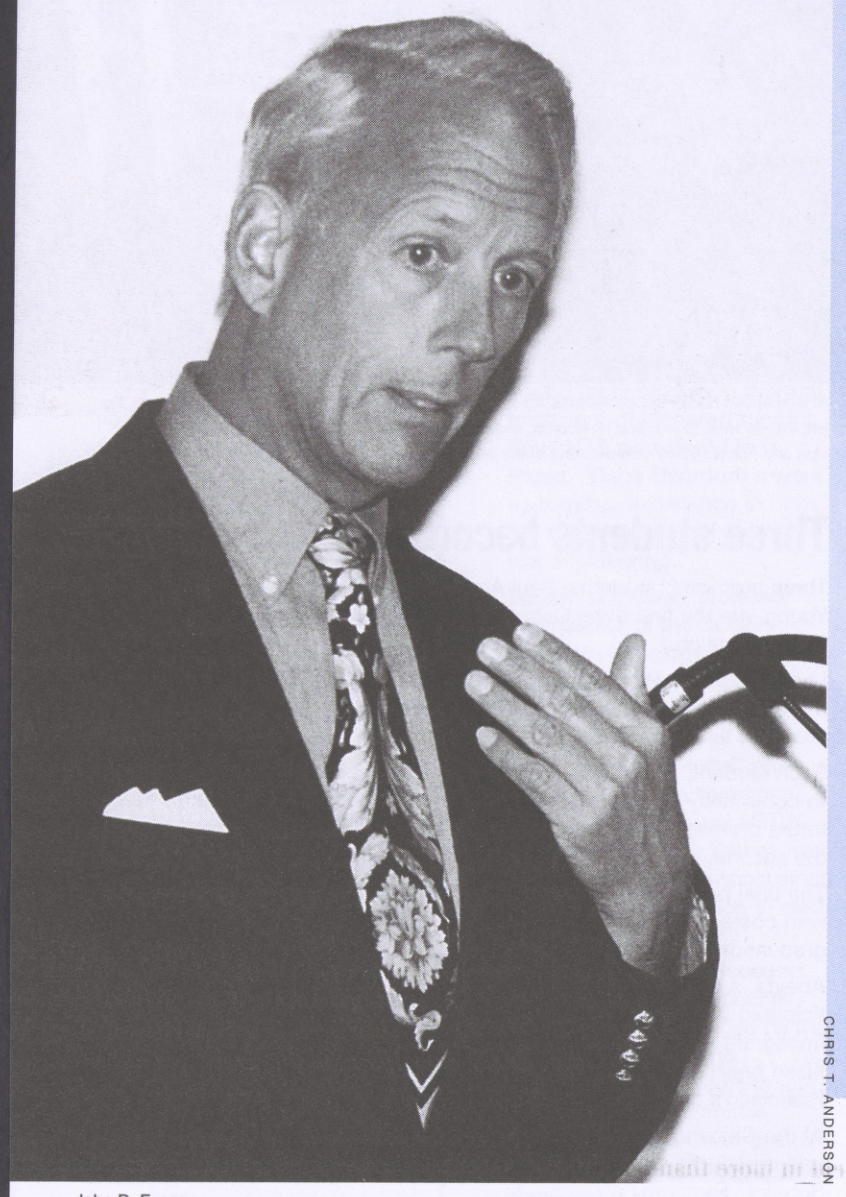
Several participants at the career fair highlighted the fact that the digital age has revolutionized job hunting with the development of online services, such as Biospace.com. By going to www.biospace.com, job seekers can access a free publication with news, company profiles and home page links and job postings. Launched in 1995, the web service is expanding this year to cover Canada and the UK, said Denise A. Popvits, business manager.

"We get over 100,000 hits a month," she said. "We have more than 500 jobs posted on our website and now we're making an effort to reach out to the users."

Apparently, the word is out. About one-third of the people who came to the Biospace booth were aware of the service or were registered users.

Representatives from Science Magazine, who hosted an informal reception following the fair, also pitched the electronic subscription service, Next Wave (www.nextwave.org). That website provides information on scientific training, career development and job market news as well as forums which graduate students, postdocs, faculty members, scientists and others contribute to daily.

talking about a *revo*



CHRIS T. ANDERSON

John D. Evans

CSPAN founder shares vision of digital age

BY PAULA MURPHY

John D. Evans, co-founder of CSPAN, the cable television service that provides gavel-to-gavel coverage of Congressional and Senate proceedings, discussed the digital age and its implications for science and education.

> Those who don't embrace the digital age will lose out....We can either embrace it with love or run from it in fear.

Evans has a professional interest in telecommunications technologies as well as a personal interest in science education, particularly concerning HIV. A member of the advisory board of the Institute of Human Virology headed by Robert Gallo, Evans was invited by the UCSF AIDS Research Institute to share with the campus community his vision of how emerging technologies will change the lives of scientists, health care providers, educators and students.

"In science, [the digital age] impacts how research is conducted, how lab notes are kept and reviewed, how scientists collaborate, how discoveries are published, how therapies are deployed and how the general public receives health care," Evans said. "For really that is what all this is about...to increase the longevity and quality of life for our fellow man."

Evans discussed some exciting technologies that will be available to consumers within the next decade, such as Internet telephony and video-on-demand, as well as the development of Internet 2, which is expected to be launched soon. The implications of Internet 2, which was initiated in response to Internet congestion by a consortium of research universities, including the University of California, is widespread, especially in the fields of education and science, he said.

First of the advanced applications of Internet 2, according to Evans, is the accelerated development of digital libraries. "These efforts will take millions of pages of historical documents, social and scientific research, medical outcomes and history and make them digitally available to all," he said.

The California Digital Library (CDL), a UC initiative, opened its digital doors to the public last month providing a single point of entry for access to thousands of the University's digital collections, services and tools at www.cdlib.org. (See adjacent story.)

Second is distance learning, which will allow students to manipulate several windows on their computer screens in which they can simultaneously see the professor, their notes, the white board and the other students in class. And, of course, they can email the homework directly to the professor. Already available in some places, Evans said, are "electronic books," which allow students to download textbooks, as well as homework assignments and notes, in their dorm rooms.

The third application of Internet 2, Evans said, is tele-immersion. "A tele-immersion system will allow individuals at different locations to share a single virtual environment," Evans explained. "For example, individuals could share and manipulate data, simulations and models of molecular, physical or economic constructs, and jointly participate in the simulation, design review and evaluation process. Another example might be scientists from various locations all participating in using a high intensity electron microscope with a super computer to model the HIV virus as it infects cells."

The fourth application is virtual laboratories, which Evans described as a heterogeneous, distributed problem-solving environment that enables a group of researchers located around the world to work together on a common set of projects.

All these advances, Evans said, will allow for "some of the greatest collaboration that man has ever seen." However, challenges need to be met in order for the benefit to be realized, such as providing resources to schools and colleges to utilize the tools of the digital age and educating and training scientists on taking advantage of digital technologies, he said.

No technology talk given this year would be complete without mentioning the Y2K computer bug. Evans said that economists estimate that this problem will cost the world $1 trillion and will shrink the US gross domestic product by 0.3 percent in the year 2000. He also said there will be substantial costs to fix the errors that are certain to be made while "fixing" the Y2K problem.

"Some economists are predicting a recession by 2001 due to Y2K glitches in information flow," Evans said.

Although he sounded a warning of Y2K's potential negative impact and acknowledged that social problems may result from inequities in access to technology, Evans was overwhelmingly optimistic about the positive impact new technologies will have in people's lives.

With more than 328 million people expected to be connected to the Internet by 2002, the delivery of health care could vastly improve, Evans said. An experiment is already under way in Georgia that has participants using health care devices to monitor their vital signs at home. Their stats are then downloaded into a computer and accessed by their health care providers. Evans also cited the example of a sailor who recently became ill while at sea but who was able, through satellite technology, to perform a surgery on himself through Internet contact with a physician.

And already being tested in some areas are "smart cards" that contain a person's full medical history and can be downloaded by health care providers all over the world. "There's no doubt you'll be carrying a smart card that has all your medical records on it," he said.

The digital age is a reality, said Evans, who urged scientists, educators, technologists, and government officials to join together in order to use the evolving technology wisely.

"Those who don't embrace the digital age will lose out," Evans said. "Education, science and our lives will be forever changed. We can either embrace it with love or run from it in fear."

volution

CHRIS T. ANDERSON

UCSF employees listen to John Evans talk about the digital age.

California Digital Library opens its electronic doors

The California Digital Library (CDL) opened its digital doors to the public last month by making available an integrated web gateway to digital collections, services and tools at www.cdlib.org.

When launching CDL's organization in October 1997, UC President Richard Atkinson described the electronic library as the beginning of "a future when our libraries, at the press of a button, can come to us, wherever we are, whenever we wish."

Complementing the physical libraries on the nine campuses of the University of California system, the CDL focuses on selecting, building, managing, preserving, and providing access to shared collections of high-quality digital materials for the University and the public.

"The CDL offers a real opportunity to bring together all of UC's collections," says Karen Butter, interim director of the UCSF Library.

Browsing and searching tools at the website provide enhanced access to more than 2,000 electronic journals from major scholarly publishers and information providers such as Science, JSTOR, the American Chemical Society, Highwire Press, Academic Press, Elsevier, Springer, Kluwer, and many more.

"One of the real advantages is that the CDL is able to negotiate licenses for journals collectively rather than by each campus," says Butter. "Now that the CDL is doing licensing centrally we can get better prices and all save quite a bit of time."

More than 3,000 inventories or finding aids for special and archival collections throughout the state are also represented, along with dozens of journal abstracting and indexing databases as well as reference databases.

Through its Directory of Collections and Services, the new CDL website provides a single point of entry for access to these collections. It complements the Melvyl® Union Catalog of UC-owned print and non-print material, as well as campus-based catalogs and websites, by directing users to a catalog or database search or directly to electronic journals, finding aids, and other digital material.

The directory is designed to be collaboratively maintained by staff across the UC system and to allow a local view of available digital resources at the user's choice. Specific views, including subject-based views, can also be created for a particular entrance to UC shared collections.

Using the CDL, a user with computer access to the Internet can digitally discover and view a variety of scholarly information resources. For example, the user could discover the latest books acquired by UC in mechanical engineering. With a few more mouse clicks, the user could find a journal on technology and culture, and in many cases link to its full contents.

Finally, the same user in just a few seconds could view an inventory and selected digitized photos of the Golden Gate Bridge in a collection of photographs held by the Bancroft Library at UC Berkeley.

The CDL and its partner libraries on each UC campus are also using digital technologies to enhance sharing of UC's 30-million volume print collection.

Debuting with the CDL website is Request, a service for UC faculty, graduate students, and staff to request material located anywhere in the UC system. UCSF already had such a system, but access was limited to the campus only. Authorized users will be able to request materials with a simple click of a button. "It's really a wonderful feature for our faculty who are increasing geographically diverse," Butter says.

Led by University Librarian Richard Lucier, former librarian at UCSF, the CDL not only operates in close collaboration with the UC campuses and their libraries, but also collaborates with other California universities and organizations to create and extend access to digital material to UC partners and to the public at large.

The Melvyl Union Catalog, the California Periodicals database — which lists 863,000 unique titles held in more than 555 libraries — and the Online Archive of California are freely available to any visitor to the CDL.

The CDL is also collaborating with the California State Library to build the Library of California, a digitally constructed library that could eventually link all of the state's public, private, school, and academic libraries — as well as many of its museums and think tanks — into one of the world's largest electronic information-sharing networks.

"The University of California stands ready to help bring together the talents and resources of the state's colleges and universities and our public libraries with the entrepreneurial energies of the private sector to build these links for sharing information," says Atkinson.

In addition to building these shared collections and services, the CDL plans to apply digital technologies to directly support the University's faculty as they develop new ways to disseminate their scholarship.

More information can be found at (www.cdlib.org/).

Forecast grim for resistant HIV, TB strains unless strategies change, team finds

BY WALLACE RAVVEN

Even as access to potent new drug treatments increases, the effort to control the spread of HIV will be swamped by a sea of resistant microbes unless current treatment strategies change, according to a team of researchers led by a UCSF scientist.

The warning stems from a new mathematical model that projects the course of the epidemic in San Francisco. The model is based on the dynamics of HIV transmission and different projected levels of safe-sex practice in the gay community.

New combinations of protease inhibitors now offer great hope to those with HIV, but the total number of people infected with virus that is resistant to this drug regimen will climb as use of the treatment increases, the model shows. And, as the treatment becomes more widespread, some clinicians and patients are likely to be less rigorous with treatment protocol, the researchers predict. Finally, as gay people come to believe that control of the disease is possible, high-risk sexual behavior among some may increase.

Taken together, these patterns lead to what epidemiologists call "amplified perversity" — the tendency for harmful trends to stack up and increase the severity of the epidemic.

"The model helps us see that community clinics must adhere very closely to a strict clinical-trial-like paradigm, and that high-risk sexual behavior must not return," says Sally Blower, study leader and associate professor of microbiology, immunology and medicine at UCSF. "Otherwise, the promise of controlling AIDS will vanish."

Blower presented her research at the annual meeting of the American Association for the Advancement of Science in Anaheim.

Helping move the study of infectious diseases into the area of prediction, Blower and her colleagues have developed three models that project the course of the AIDS epidemic in the San Francisco Bay Area, tuberculosis in developing countries and genital herpes in the US.

"The study of infectious diseases has traditionally been the practice of recording what has happened," Blower says. "But we must and can turn epidemiology into a predictive science." Because drug-resistant bacteria or viruses behave differently than their drug-sensitive counterparts, she says, a strategy that curbs an epidemic of drug-sensitive microbes can actually generate an epidemic of drug-resistant strains.

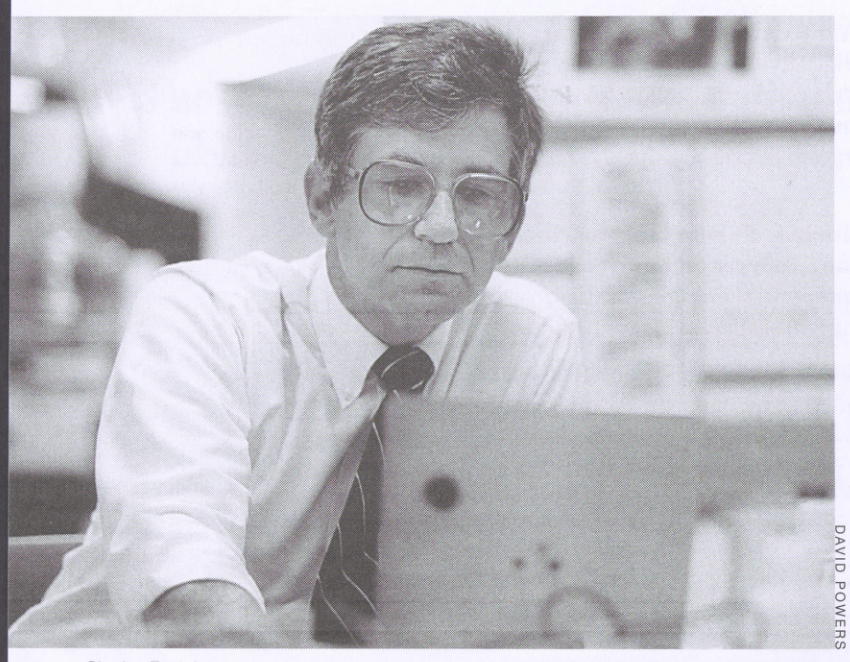
Tuberculosis offers a sobering example. Some three million people worldwide die every year from the TB bacterium. The World Health Organization (WHO) seeks to rid the developing world of TB, Blower says, by treating drug-sensitive TB cases but not the more difficult drug-resistant ones. Her research team developed a model to anticipate the effect of this strategy.

"We found that as you eradicate the drug-sensitive TB, you move toward a very rapid increase in the number of drug-resistant cases." The result of this so-called "perverse" effect is a new, even more intractable epidemic, this time involving drug-resistant TB. If its seeks to wipe out the scourge of TB, the WHO must change its strategy, Blower says, and immediately begin treating drug-resistant TB in addition to drug-sensitive cases.

"Otherwise, current control strategies could eventually result in a three-fold increase in the TB death rate, and TB may become an even greater killer than it is today," she says.

The good news from the modelers concerns the genital herpes epidemic in the US. About 22 percent of Americans are afflicted with these contagious genital lesions, with numbers well above 40 percent in some inner cities. Only about five percent of Americans seek treatment, but Blower and her colleagues found that unlike the problem with TB, the mutation rate and other traits of herpes allows an aggressive treatment program without generating a dangerous number of drug-resistant cases. In fact, they found, hundreds of cases of drug-sensitive genital herpes could be prevented for every case of drug-resistant strain that would be created by the treatment program.

The take-home message: "Each viral or bacterial epidemic will be different, depending on the biology of the organisms, the genetic mechanism by which drug resistance develops and the treatment regimens. The purpose of the models is to determine when treatment will be effective in controlling epidemics, and when it may cause more harm than good."



DAVID POWERS

Charles Epstein

Media coverage of genetics gets mixed review

BY JENNIFER O'BRIEN

The media have done a good job of informing the public about genetics, but have also inflamed fears and exaggerated concerns about numerous genetics issues, says Charles Epstein, a professor of pediatrics and co-director of the Program in Human Genetics at UCSF.

Epstein spoke at a session on "Genetic Discoveries, the Media, and Public Anxiety," at the American Association for the Advancement of Science on Jan. 24.

"I would give the media reasonably good marks on the information score, and in some cases excellent marks," says Epstein, who is a specialist in the study of genetic disorders, including Down syndrome. "But on the issues of generating fear and exaggerating what science has done or can't do, the writers and producers of the media have not, in my opinion, lived up to their responsibilities. Whether done inadvertently or deliberately, the raising of fearful specters about genetics has served only to make rational discussion difficult, if not impossible, and to polarize debates that need consensus."

Epstein suggests that far too often periodical covers, headlines and graphics prove to be misleading banners for stories that are actually reasonable and measured in content, demonstrating his point by using slides of covers, headlines, graphics and comics from Time magazine, The Economist and The New York Times.

"When it comes to genetics, the tendency very often seems to be to emphasize that which is dangerous or frightening, especially in the headlines and graphics and, given the rapidly emerging power of modern genetic technology, fearful prospects are easily engendered."

To wit, on the cover of Technology Review several years ago, he noted, a DNA helix replaced the serpent in the Garden of Eden; a cover of The Economist read "The genetic illusion," and showed man ensnared in fetters composed of DNA helices. The latter suggested, says Epstein, that there is "something malevolent about DNA, that genetic knowledge is dangerous, that it will enslave us."

These messages are powerful, says Epstein, and convey troubling views of what genetic knowledge might portend, "even though they probably go beyond what the articles actually say." Unfortunately, he adds, "their impact is unavoidable."

Epstein did not discount the public's fears, characterizing them as two-fold: first that it may ultimately become possible to manipulate and create life itself, thereby broaching the domain traditionally reserved for whatever deity one believes in. And second, that control of our genetic constitution could lead to the most pronounced misapplication of genetics — the eugenics movement.

"Nowhere is this fear so acute at present as in certain elements of the Ashkenazi Jewish community," he says. "The media have a responsibility to inform and teach the public about what is being done and to take cognizance of and give expression to public fears and concerns."

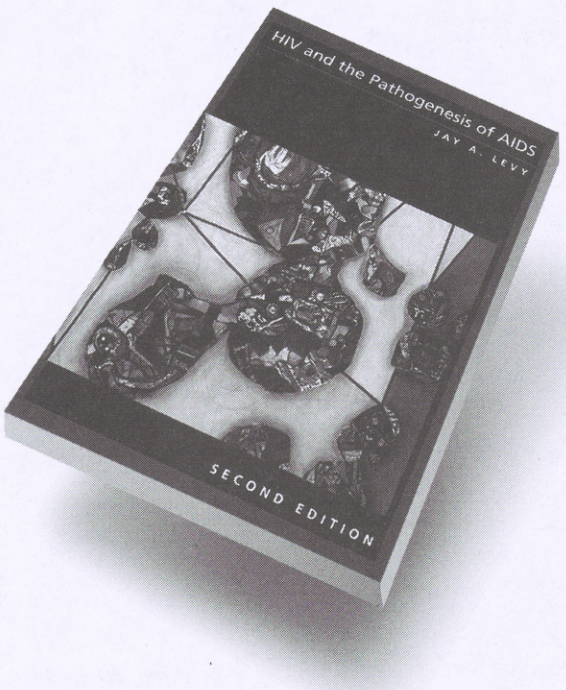
Epstein also emphasizes that it is the responsibility of the scientific community to engage in discussion with the public on genetics issues. "We, as scientists, do both the public and ourselves a great disservice if we persist in regarding any questioning of what we are doing or of where our work might lead as being antiscientific and as an infringement on our rights as scientists and on our academic freedom, if you will. We need to listen to what is being said and to engage in an honest and meaningful debate."

Scientists themselves bear some of the responsibility for the mistrust of the science of genetics because of their own hyperbole and inflated claims, Epstein says. He cited a report prepared several years ago by the Panel to Assess the NIH Investment in Research on Gene Therapy, the so-called Orkin/Motulsky Committee, in which it was suggested that "over-zealous representation of clinical gene therapy has obscured the exploratory nature of the initial studies, colored the manner in which findings are portrayed to the scientific press and public, and led to the widely held, but mistaken, perception that clinical gene therapy is already highly successful."

"Such misrepresentation threatens confidence in the field and will inevitably lead to disappointment in both medical and lay communities," the report continues. "Of even greater concern is the possibility that patients, their families, and health providers may make unwise decisions regarding treatment alternatives, holding out for cures that they mistakenly believe are 'just around the corner.'"

Epstein heads the division of medical genetics at UCSF and established the UCSF Medical Genetics Clinic in 1967. The clinic is a model for the genetics counseling services now available for patients and their families throughout California and much of the US.

He also co-directs with Ira Herskowitz the newly established Program in Human Genetics, which serves as a unified framework for all human genetics clinical, teaching and research activities at UCSF. In addition, he is the director of the UCSF fellowship program in medical genetics.



(LEVY FROM PAGE 1)

- Zidovudine (AZT) therapy for pregnant mothers can greatly reduce the transmission of HIV to newborn children. The evidence for this effect is well established and the incidence of HIV transmission to newborns in the US has dramatically decreased.
- New therapies have brought great benefit to HIV-infected people.
- Co-receptors for HIV have been discovered.
- Needle exchange programs can reduce the risk of HIV infection in users of illicit intravenous drugs. Such programs thus decrease the number of deaths from AIDS and the costs for treatment.

For his latest book Levy reread more than 2,000 research articles and has added another 1,000 papers to the citation list. The new edition includes chapters on antiviral therapies and vaccine development. Research on vaccines will intensify over the next few years, Levy says, particularly because of greater attention by the US government.

"Some of the impetus for vaccines may come from the current belief that anti-HIV treatment, with combination therapy, has been working and we should now focus more on prevention," Levy says. "It is, however, still too early to know how long the present antiviral drugs will control HIV."

Levy likens the challenge to find an HIV vaccine to the challenge of cancer: targeting the affected cell. Health care providers must be able to eliminate the incoming infected cell and the resident infected cells if approaches to prevent established infection are to be successful, Levy says.

Indeed, as Levy emphasizes, HIV can linger in certain reservoirs, such as the brain, the kidneys and the testes, which may not be affected by antiretroviral therapy. "Thus, these sites for viral replication need to be approached if continual control of HIV infections is to be achieved."

Levy's first personal encounter with AIDS began in August 1981, when Paul Volberding, now director of the UCSF AIDS program at San Francisco General Hospital Medical Center, called him to see a young gay man with Kaposi's sarcoma at that hospital. HIV was first identified two years later. Levy and co-workers were among the first to identify the virus, which was recovered from AIDS patients from different known risk groups.

Since then, Levy and his group at UCSF have focused on biologic, immunologic, and molecular studies of the AIDS virus, emphasizing viral and immunologic features of HIV pathogenesis and long-term survival.

While Levy's second edition includes many of the answers that AIDS pioneers have discovered in recent years, much about the disease remains unsolved.

"The exact mechanisms of CD4+ cell depletion and immune deficiency are not yet clear, and the ability of the virus to remain in a silent or latent state, as well as several other features of HIV infection, remain mysterious," Levy concludes. "Moreover, whether more virulent and drug-resistant viruses are emerging in the population as a result of continual transmission merits attention. Most importantly, how the advancements made in detection and treatment of HIV infection in the United States can be shared with less economically developed countries is a vital question."

campus notes

Plan a program for daughters at work

The UCSF campus is again hosting one of the largest Take Our Daughters (and Sons!) To Work Days in the nation. UCSF is seeking faculty and staff to host programs for the children visiting the University during this year's event slated for Thursday, April 22.

Established by the Ms. Foundation in response to studies documenting significant decreases in self-esteem in American girls, the day's goal is to expose children to the diversity of available job opportunities, to bolster self-esteem and to encourage a renewed interest in academic performance.

Last year, 480 girls and 84 boys participated in 55 programs at UCSF locations. Some 67 percent of the children ranked the experience as "terrific" and 81 percent said they planned to return this year.

A program lasts only a half-hour to three hours and it's easy, fun and meaningful, says Katherine Riordan, event planner in the public affairs department. To get involved, call Riordan at 476-0729 or email kathr@itsa.ucsf.edu. Leave your name, your fax number and your Box number. The deadline for faxing your program outline to her is Friday, Feb. 12.

This event is sponsored by the department of public affairs, UCSF Stanford Health Care, the UCSF Graduate Division, School of Medicine Extramural Academic Programs, the Chancellor's Advisory Committee on the Status of Women, the School of Dentistry Educational Support Services, Reprographics, and the Center for Gender Equity.

Nominate for public service award

The deadline to nominate a faculty, student or staff member for the 1999 Chancellor's Award for Public Service is Monday, Feb. 15.

UCSF Stanford Health Care employees are eligible to nominate and to be nominated.

In addition, nominees may be selected to receive the Thomas N. Burbridge or the Edison Uno Public Service Award. Candidates for all awards must demonstrate outstanding public service beyond the scope of their normal job duties or student requirements.

The awards are $2,000 each, with an additional $100 given by the UCSF Black Caucus for Burbridge award.

Nominations must be submitted to the Chancellor's Award for Public Service Committee, c/o Public Affairs, Box 0462, by 5 p.m. on Feb. 15.

The awards will be presented at a luncheon honoring the recipients as part of Founders Day festivities.

A call to middle-aged men, women

First-year medical students are seeking to learn about the rewards and challenges of middle-aged men and women as part of their course in human growth and development.

Men and women ages 40 to 65 are sought to answer students' questions about their personal relationships and goals, parenting of older children, caring for older parents, work life and physical well-being.

All meetings will be held Friday, Feb. 19, from 10:45 to 11:45 a.m. Each participant will receive a $15 stipend, plus two hours of parking. Each participant will meet individually with a small group of nine or 10 students. To participate, call Sherry Brooks, psychiatry medical student education, at 476-7720 or email her at (sherryb@lppi.ucsf.edu).

Apply for UC MEXUS research grants

UC MEXUS seeks grant proposals from UC faculty members and Ph D candidates for collaborative projects between UC and Mexican scholars, and for research on Chicano populations and/or Mexico-related issues. Faculty grants of up to $15,000 for one year, and dissertation grants of up to $7,000 for two years are offered.

Faculty proposals are due March 1. Student proposals are due April 2.

In collaboration with Mexico's Council for Science and Technology (CONACYT), UC MEXUS offers a grant of up to $25,000 for one year for collaborative research in the sciences and humanities involving UC principal investigators and researchers at Mexican institutions; the proposal deadline for these grants is March 1. UC MEXUS also offers small grants of up to $1,000 for special, one-time, short-term needs. Proposal deadlines for small grants are Feb. 5, June 4, and Oct. 1. For information contact Kathryn Vincent at 909/787-3519 or kathryn.vincent@ucr.edu.

reduce your use

22%

of the world's greenhouse gas emissions are produced by the US – which has a mere 4 percent of the global population. To reduce this trend, carpool, take public transit, plant trees and buy earth-friendly products.

www.fm.ucsf.edu/energy.htm

University of California
San Francisco
UCSF
Facilities Management
Water and Energy Awareness Program

calendar

Feb. 6–19, 1999

6 saturday

PEDIATRICS SEMINAR: "The Sixth Annual Update in Behavioral/Developmental Pediatrics," 8 a.m.-5 p.m., Parnassus. This program updates clinical approaches for particularly challenging childhood disorders.

ELDER DRUG USE: The Institute for Health & Aging and the School of Pharmacy hosts "A Workshop on Safe Medical Drug Use for Older Adults," 8:30 a.m.-12:30 p.m., UCSF Laurel Heights, 3333 California St. Learn safe use of prescription and over-the-counter drugs. Free. Limited seating. To register, call 750-5342.

LOW VISION FORUM: Alec Karp, orientation and mobility specialist, speaks about safety, 11 a.m.-1 p.m., ACC, Parnassus. Discover how to manage your safety by using both visual and non-visual clues and skills. Free. Call 626-5313.

8 monday

QI GONG CLASS: Millberry Programs & Services offers Qi Gong classes Mondays, 8:15-9:30 p.m., through March 29, MU Fitness Center, Parnassus. Unblock tension and promote physical toning through ancient Chinese meditation. To enroll, call 476-0350.

CANCER CENTER FORUM: The Cancer Center hosts a forum titled "Creating Balance From the Inside Out — Increase Vitality and Release the Stress of Modern Life," 5-7 p.m., 2356 Sutter St., 1st floor. Learn techniques to improve emotional well-being; reduce fatigue, anxiety. To RSVP, call 885-3693.

FOR YOUR EYES ONLY: John Stanley, professor, clinical ophthalmology, UCSF Cornea, Cataract and Refractive Surgery Service, a part of UCSF Stanford Health Care, presents "Better Vision Now," 6 p.m., 8 Kirkham St. Learn new surgery options for the vision correction. Free. Call 476-5021.

9 tuesday

DINING FOR ELDERS: The Auxiliary Goldman Institute on Aging sponsors "The 16th Annual Dinner á la Heart," a program to be help elderly people to lead more independent lives. Participants may dine out at one of the 70 participating SF Bay Area's restaurants with proceeds benefitting the Goldman Institute on Aging's comprehensive social services and medical care. Among the fine restaurants participating in the fundraiser: The Ritz Carlton, Spago, Splendido, Swan Oyster Depot and Tommy Toy's. For more information, call 750-4124.

10 wednesday

CDC DIRECTOR VISITS: Helene Gayle, director, STD and TB Prevention Centers for Disease Control (CDC), and Prevention, visits UCSF today and Thursday, Feb. 11. She will meet with groups of investigators regarding their research and be available to talk about trends and directions at the CDC. For more information, call 597-9203.

NEUROLOGY MEETING: The 32nd annual "Recent Advances in Neurology," Feb. 10-12, The Mark Hopkins Inter-Continental, 1 Nob Hill, San Francisco. Designed for the practicing neurologist, this meeting provides a review of clinical neurology and covers both current concepts and recent advances. Fee. To register, call 476-5808.

BROWN BAG LECTURE: Ward G. Gypson, medical director, rehabilitation services, SFGHMC and assistant clinical professor, UCSF, presents "Acupuncture: 5000 Years in Sixty Minutes," 12:10 p.m., HSW 300, Parnassus. Get a historical account of acupuncture theory, research and treatment. Sponsored by Public Service Programs. Call 476-4394.

PSYCHIATRY GRAND ROUNDS: Mardi J. Horowitz, professor, department of psychiatry, presents "Impact of Trauma on Identity Formation," 4-5 p.m., LPPI Auditorium, Parnassus. Sponsored by the School of Medicine.

SPANISH FOR HEALTH CARE WORKERS: Oscar Alvarez, University of Guadalajara, presents "Spanish for Health Care Providers (Level I)," 4:30-6:30 p.m., M 1115, Parnassus. Fee. For more information, call 476-2993.

FACTS ON JFK DEATH: The Bay Area History of Medicine Club hosts a talk by Gary L. Aguilar, assistant clinical professor of ophthalmology, Stanford Medical School and UCSF, who will speak on "Recent Disclosures on the Medical Aspects of the John F. Kennedy Assassination," 8 p.m., HSW 300. Guests welcome. Call 567-3535.

11 thursday

INFECTIOUS DISEASES CONFERENCE: "The Sixth Annual Epidemiology and Prevention of Infectious Diseases: Emerging Infectious Disease," Feb. 11-13, Crowne Plaza, Union Square. This program gives an overview of the scope and methods employed in infectious disease epidemiology and research, the problem of antimicrobial drug resistance, and the epidemiology and prevention of significant diseases. The program is designed for all practitioners in the disciplines of epidemiology, public health, health administration, medicine, nursing, and related professions. Fee. To enroll, call 476-5808.

WINTER ENRICHMENT SERIES: Swami Prabuddhananda, minister, Ramakrishna Order of India, Vedanta Society of Northern California, presents "Death and Dying: Cultural Perspective, East India," noon, HSW 301, Parnassus. Get a glimpse into one area of life where cultural knowledge and sensitivity can make a significant difference in communication with patients. Co-sponsored by the UCSF Hospice and Palliative Care Group.

MEDICAL GRAND ROUNDS: Glenn M. Chertow, assistant professor of medicine, division of nephrology, presents "Race and End-Stage Renal Disease," noon-1 p.m., N 225, Parnassus. Sponsored by the department of medicine.

NOONTIME FILM SERIES: Laurel Chiten presents a New Day film titled "Twitch and Shout," noon-1 p.m., Toland Hall, Parnassus. This award-winning documentary provides an intimate journey into the startling world of Tourette Syndrome (TS), a genetic disorder that can cause a bizarre range of involuntary movements, vocalizations and compulsions, through the eyes of a photojournalist with TS. Closed-captioned. Sponsored by the Disability Interest Group. For more information, call Alice Wong at 502-7097 or email alwong1@itsa.ucsf.edu.

DOMESTIC PARTNER BENEFITS: The UCSF Center for Gender Equity presents "Navigating the Maze of UC's Domestic Partner Benefits," noon-1 p.m., N 217, Parnassus. Here's your chance to get answers from a panel of experts. Free. Call 476-5836.

CHANCELLOR'S CONCERT: Machiko Kobialka, piano, Doris Fukawa, violin and Emil Miland, cello, perform "Mendelssohn's Piano Trio in C Minor," 12:15-12:45 p.m., Cole Hall, Parnassus. Free.

GRAND ROUNDS: Laurence Baskin presents "Death and Complications," 6-8 p.m., HSW 301, along with a case presentation by David Nudell. In addition, A. Barry Belman, department of urology pediatric visiting professor, will present "Voiding Dysfunction: Getting Wet Patients Dry." Sponsored by the department of urology.

12 friday

LINCOLN'S BIRTHDAY

PEDIATRIC UROLOGY SEMINAR: Laurence S. Baskin, program chair, chief, pediatric urology, department of urology, presents "The Annual UCSF Pediatric Urology Seminar," 8 a.m.-4 p.m., Parnassus. This seminar is designed for the practicing urologist and provides a review of pediatric urology. Participants are requested to bring 35mm slides or X-rays of their own particularly interesting or difficult cases for discussion. Fees. For more information, call 476-4251 or email inquire@ocme.ucsf.edu.

DEAN'S FORUM: The Academic Business Officers Group (ABOG) presents "Dean's Roundtable," 12:10-1:30 p.m., N 225, Parnassus. This is an informal panel discussion featuring deans from UCSF's professional schools and graduate division. Free. For more information, call 476-1157.

NAS SYMPOSIUM: See upcoming events.

14 sunday

HAPPY VALENTINE'S DAY!

AIDS RESEARCH LECTURE: Peter Selwyn, a noted AIDS researcher and clinician, and associate director, AIDS program, Yale University, School of Medicine, will read from his book "Surviving the Fall: The Personal Journey of an AIDS Doctor," 7:30 p.m., A Different Light Bookstore, 489 Castro St., San Francisco. Selwyn has worked with drug-using populations with AIDS since the early years of the epidemic. For more information, call 431-0891.

15 monday

CHINESE/JAPANESE NEW YEAR

PRESIDENT'S DAY

UCSF HOLIDAY

16 tuesday

BROWN BAG LECTURE: Ellen Hughes, associate clinical professor, medicine and interim director, UCSF Osher Center for Integrative Medicine, presents "Herbal Medicine: Boom or Bust," 12 –1 p.m., Mount Zion, Herbst Hall. Sponsored by Public Service Programs. Call 476-4394.

17 wednesday

BROWN BAG LECTURE: Steve Gunther, assistant clinical professor and June Graham, physiotherapist, Sports Medical Center, present "Spring Training for Amateur Athletes," 12:10 p.m., HSW 300, Parnassus. Learn correct warm-up strengthening and training exercises to reduce sports-related injuries. Sponsored by Public Service Programs. Call 476-4394.

18 thursday

WINTER ENRICHMENT SERIES: John Beeson, CPA, presents "Investment Strategies," noon, HSW 301, Parnassus. Beeson discusses types of investments, risk factors, time lines and personal choices. Co-sponsored by the UCSF Blue Chip Buddies.

MEDICAL GRAND ROUNDS: Steven R. Cummings, professor of medicine, epidemiology & biostatistics and associate chairman, clinical research, presents "Prevention of Breast Cancer," noon-1 p.m., N 225, Parnassus. Sponsored by the department of medicine.

WEIGHT CONTROL: Laurel Mellin, associate clinical professor, family and community medicine and pediatrics, presents "The Diet-Free Solution," noon-1 p.m., N 217, Parnassus. Mellin explains a proven, scientific and easy method of permanent weight loss. Free. Sponsored by the Center for Gender Equity. Call 476-5836.

BROWN BAG LECTURE: Caren Baroff, owner, Baroff Enterprises, inspirational coach and consultant, presents "Boldly We Go," 12:10-1 p.m., MCB, 1855 Folsom St., 6th floor. Discover how to shape your capacity for love by resonating with the center of your thoughts, behaviors and attitudes. Sponsored by Public Service Programs. Call 476-4394.

CHANCELLOR'S CONCERT: Paul Brancato, violin, Christina King, viola, Barbara Andres, cello, Stephen Tramontozzi, bass and Robin Sutherland, piano, perform "Farrenc's Piano Quintet," 12:15-12:45 p.m., Cole Hall, Parnassus. Free.

upcoming events

NAS forum features top scientists

Nationally prominent scientists will discuss their research at a free symposium sponsored by the National Academy of Sciences (NAS) on Friday, Feb. 12, from 1 to 3:30 p.m., in Toland Hall.

Elizabeth Blackburn, professor and chair, UCSF department of microbiology, and Peter Schultz, professor, UC Berkeley department of chemistry will be moderators for the following symposium speakers:

- Cynthia Kenyon, Herbert Boyer professor of biochemistry and biophysics, will speak about "Hormonal Control of Aging in *C. elegans.*"
- James E. Rothman, vice chairman, Sloan-Kettering Institute, and chairman, Cellular Biochemistry and Biophysics Program, Memorial Sloan-Kettering Cancer Center, will talk about "The Minimal Machinery for Vesicle Budding and Fusion."
- Alexander Pines, Glenn T. Seaborg professor of chemistry, Chancellor's Research Professor, UC Berkeley, will address "Lighting Up" NMR and MRI.
- W. Henry Weinberg, chief technology officer and vice president of Symyx Technologies will present "Combinatorial Methodologies for Catalyst Synthesis and Screening."

The NAS, chartered by Congress in 1863, is a private nonprofit dedicated to the furtherance of science and technology for the general welfare.

Forum on women, teen health

UCSF hosts its sixth annual Women's Health 2000 symposium, called "Optimizing Your Health for the New Millennium." More than 25 experts on women's health and teen health will talk about herbal remedies, sexual health, teen risk-taking and more on Saturday, March 20, from 8:30 a.m. to 4:30 p.m., on the Parnassus campus. State Senator Jackie Speier will deliver the keynote address on "The Politics of Women's Health in California." Cost is $40 for adults, $30 for seniors and $10 dollars for teens. For more information or to register, call 263-0321.